Union Square Utility and Streetscape Improvements Study and Design

April 13, 2015
Agenda

6:30-6:40 . . . . . . . Introduction
  - Jennifer Molina, Transportation Planner, City of Somerville

6:40-6:50 . . . . . . . Overview and Project Update
  - Rachel Burckardt, PE, Parsons Brinckerhoff

  - Utilities - Rachel Burckardt, PE, Parsons Brinckerhoff
  - Traffic - Kristen Torrance Clarke, PE, PTOE, Parsons Brinckerhoff
  - Q&A/Discussion

7:20-8:00 . . . . . . . Small Group Discussion
  - Q&A/Discussion
City of Somerville Team

- Mayor Joseph A. Curtatone
- Ward 2 Alderman Maryann M. Heuston
- Ward 3 Alderman Robert McWatters
- Department of Public Works City Engineering
- Office of Strategic Planning & Development
  - Michael Glavin, Executive Director
  - Jennifer Molina, Transportation and Infrastructure
- Brad Rawson, Senior Planner, Planning Division
- Traffic and Parking Department
Civic Advisory Committee

- Wig Zamore, Chairman
- Joe Beckmann
- Angelica Bennatti
- Jennifer Blundell
- Susan Callahan
- Pokye Casserly
- Robyn Champion
- Fr. Richard Curran
- Mike Dacey
- Erik Fellinger
- Irma Flores
- Gregore Jenkins

- Angelina Jockovich
- Shaina Korman-Houston
- Chris Mancini
- Pat McCormick
- Erik Neu
- Philip Parsons
- Emily Reichert
- Kat Rutkin
- Rebecca Schrumm
- Shu Talun
- Anne Tate
- Gordon Wong
The PB Team

- Parsons Brinckerhoff: Project Management, Civil, Structural & Traffic Engineering, Public Outreach
- Team Better Block: Experiential Community Engagement
- Crosby Schlessinger Smallridge, Inc.: Streetscape & Urban Design
- Toole Design Group, Inc.: Bicycle & Pedestrian Facilities
- Bryant Associates, Inc.: Surveying
- PEER Consultants, Inc.: LSP Services
Project Overview and Update
Project Objectives

- Recognize the unique history of Union Square
- Build on foundation of previous work
- Coordinate with ongoing and future projects
- Develop utility and transportation solutions
- Integrate all modes of transportation (pedestrians, bicyclists, transit, vehicles)
- Design for improvements that can be built
Scope

- Utilities
- Transportation
- Public Space
- Development Impacts
- Public Outreach

Union Square Utility and Streetscape Improvements Study and Design
Public Outreach

Preliminary Streetscape Design

Meeting #1: Nov. 18, 2013
Meeting #2: Jan. 29, 2014
Meeting #3: March 25, 2014
Team Better Block Demonstration: May 30, 2014
Meeting #4: Oct. 20, 2014
Meeting #5: Jan. 8, 2015
Meeting #6: Apr. 13, 2015

Ongoing Advisory Committee Meetings/Coordination

Union Square Utility and Streetscape Improvements Study and Design
Somerville by Design Survey

- 72% of Respondents Stated that Being Able to Safely Bicycle Through the Square was “very important”
- 81% of Respondents Stated that Being Able to Safely Walk Through the Square was “very important”
- These sentiments are reflected in the ideas presented in this presentation
Project Update

- Survey – Complete
- Soils Investigation – Fieldwork done; draft report prepared
- Traffic counts and data – Complete
- Water System Improvements – Concept complete
- Sewer/Storm Drain Improvements – Concept developed; modeling underway
- Coordination with US2 – Ongoing
- Interim Improvements: 25% Plans Winter 2015
- Interim Improvements: Final Design- Spring 2015
Water System Improvements

Yellow = New Water Mains

Green = Clean & Line (by others)
Sanitary/Storm System Improvements

- Sewer separation
- Added capacity & off-line storage: Union Sq. to CMI via Somerville Ave.
Early Action Plan: Interim Improvements
Early Action - Interim Improvements

- Goal: Identify short-term roadway improvements that could be accommodated within the existing curb lines
- Design Completion: Spring 2015
- Estimated Construction Period: July December 2015
- Include utility work in Prospect Street
Prospect Street: Sewer & Water

- New sewer and water main to serve MBTA station and D2 development
- New fire hydrants
Goals of Interim Transportation Improvements

- Improve Traffic Flow & Safety at Signalized Intersections
  - Reduce Overall Intersection Delay
  - Reduce Circuitous Traffic Movements
    - One-Way vs. Two-Way Webster + Prospect
  - Evaluate Turn Lanes at Intersections
Goals of Interim Transportation Improvements

- Improve Pedestrian Connectivity
  - Signal Timing/Phasing
    - Exclusive vs. Concurrent Phasing
    - Leading Pedestrian Interval
Goals of Interim Transportation Improvements

- Improve Pedestrian Connectivity
  - Crosswalk Locations
    - Shorten Crosswalk Locations where Possible
      - Modify Alignment
      - Adding Bump-out
    - Add any Missing Pedestrian Links
Goals of Interim Transportation Improvements

- Improve Bicycle Connectivity
  - Painted Bicycle Lanes

- Bike Boxes
  - Increase Visibility of Cyclist
  - Reduces Signal Delay
  - Facilities Left Turn Position
  - Helps Prevent Left Hook Conflicts
Goals of Interim Transportation Improvements

- Improve Bicycle Connectivity
  - Two Stage Turn Queue Box
    - Left Turn Safety
    - Formal Queue Space
    - Reduces Turning conflicts
    - Separates Turning & Thru Bicyclists
Prospect/Somerville/Washington
Recommendations from 25% Design

- Add bicycle boxes on all approaches
- Add bicycle lane on Washington St NB
- Bicycle striping thru the intersection
- Crosswalk Striping
- Sharrows on Prospect SB
- ‘Do Not Block’ Intersection Striping on Washington Street at Municipal Lot
- Modify Turn Radius on NW Corner
- Increase Leading Pedestrian Interval from 3 to 5 seconds
Prospect/Somerville/Washington Concept
Prospect/Somerville/Washington Signal Operations

SIGNAL PHASING

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Webster/Somerville/Washington

Recommendations from 25% Design

- Eliminate Webster NB left turn lane to allow full bicycle lane SB thru intersection
- Add bicycle boxes on all approaches
- Bicycle lane on Somerville Avenue WB approaching the intersection
- Sharrows on Webster Avenue SB
- Crosswalk Striping
- Modify lane alignment on Somerville Avenue WB to create left turn pocket with thru and right turn lanes
- Shorten crosswalk distance on east side of intersection
- Increase Leading Pedestrian Interval from 3 to 5 seconds
Webster/Somerville/Washington Concept
Webster/Somerville/Washington Signal Operations

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PEDESTRIAN INTERVALS

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Webster/Prospect

Recommendations from 25% Design

- Add bicycle box on Webster Ave SB
- Add sharrows on Webster Ave NB and Prospect SB
- Add bicycle facilities south of intersection
- Update phasing to have an exclusive phase when crossing the north side of Prospect Street
- Extend Prospect St bicycle striping into intersection
Webster/Prospect Concept
Webster/Prospect Signal Operations

SIGNAL PHASING

PEDESTRIAN INTERVALS

*Exclusive Ped Called Only by Push Buttons crossing North side of Prospect

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Additional Recommendations from 25% Design

- Reduce cut thru traffic on Newton Street
- Two-way bicycle traffic on Newton Street
- Provide additional safety measures for midblock crosswalk on Somerville Avenue
- Improve sight lines for pedestrian crosswalk on Webster Street at Newton Street
Discussion

- Utilities
- Prospect St. & Webster Ave.
- Bicycle accommodations
- Pedestrian crossings
- Connection with Green Line Station
- Bus stop relocations
Next Steps

- **Utility improvements:**
  - Advance concept plans & modeling for sewer separation

- **Early Action – Interim Improvements:**
  - Finish design
  - Advertise for bids

- **Street improvements – Refine concept plans**
  - Bicycle accommodations
  - Improved pedestrian crossings
  - Connection with Green Line station
  - Bus stop relocations

- **Streetscape Design:**
  - Plaza alternatives
  - Streetscape concepts

- **Explore Federal Funding - 2015 TIGER Grant**

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**Contact Us**

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